

## CURRICULUM VITAE

**NAME: Ibrahim Mohamed Abdelhalim Mohamed**



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### **PERSONAL DATA:**

- **Date of Birth:** 19/10/1987
- **Place of birth:** Egypt – Sohag
- **Nationality:** Egyptian
- **Marital Status:** married having two daughters
- **Mailing Address:** Chemistry Department-Faculty of Science –Sohag University, Sohag, 82524, Egypt.

### **ACADEMIC RECORDS:**

#### **1. “Ph.D.” (Materials Chemistry) (08/2017)**

Date: August 2017.

Institution: Department of Bionanosystem engineering, Chonbuk National University, Republic of Korea.

Thesis entitled: Synthesis, physicochemical and photovoltaic studies of electrospun hybrid nanofibers for solar energy application. (Language of study: English)

#### **2. “M.Sc.”(Inorganic Chemistry):**

Date: September 2013.

Institution: Chemistry department - Sohag University – Egypt.

Thesis entitled: Synthesis, physicochemical properties and kinetic studies of some hydrophilic Fe(II) imino-Complexes. (Language of study: English)

#### **3. “B.Sc.” (Chemistry):**

Date: June 2008.

Institution: Chemistry department - Sohag University – Egypt.

Overall Grade: Excellent with degree of honors (**89.62%**). (Language of study: English).

### **CURRENT POSITION:**

- Assistant Professor, Chemistry department, Faculty of science, Sohag University Egypt.
- PhD student, Bionanosystem engineering department, Chonbuk National University, South Korea.
- Lecturer and researcher assistant of physical and inorganic Chemistry in Chemistry Department, Faculty of Science, Sohag University, Sohag, Egypt.
- Demonstrator of analytical, physical and inorganic Chemistry in Chemistry Department, Faculty of Science, Sohag University, Sohag, Egypt.

### **PRIZES & SCHOLARSHIPS:**

- BK-21 Scholarship for talented PhD students; Chonbuk National University, Republic of Korea.
- Egyptian government scholarship for first ranked BSc students; Sohag University, Egypt.

### **SCIENTIFIC PRODUCTION:**

#### **(i) Article Papers**

1. Ahmed S. Yasin, Jongku Jeong, **Ibrahim M.A. Mohamed**, Chan Hee Park, Cheol Sang Kim. "Fabrication of N-doped & SnO<sub>2</sub>-incorporated activated carbon to enhance desalination and bio-decontamination performance for capacitive deionization" *Journal of Alloys and Compounds* **2017**, 729, 764-775 (DOI: 10.1016/j.jallcom.2017.09.185). Journal Ranking [IF = 3.133, Q1, Metallurgy & Metallurgical Engineering, 5/74].
2. **Ibrahim M A Mohamed**, Van-Duong Dao, Ahmed S Yasin, Hamouda M Mousa, Mohamed A Yassin, Muhammad Yasir Khan, Ho-Suk Choi and Nasser A M Barakat. "Physicochemical and photo-electrochemical characterization of novel N-doped nanocomposite ZrO<sub>2</sub>/TiO<sub>2</sub> photoanode towards technology of dye-sensitized solar cells" *Materials Characterization* **2017**, 127, 357-364 (DOI: 10.1016/j.matchar.2017.03.014). Journal Ranking [IF = 2.714, Q1, Characterization & Testing; Materials Science, 5/33].
3. Mohamed A. Yassin, **Ibrahim M A Mohamed**, Fahad S Al-Mubaddel, Nasser A M Barakat. "Effective and High-Performance Graphene Electrode for Acidic Electrolyte Supercapacitors Prepared from Commercial Sugar by One-pot Procedure" *Materials Letters* **2017**, 201, 22-26 (DOI: 10.1016/j.matlet.2017.04.123). Journal Ranking [IF = 2.572, Q2, Multidisciplinary Materials Science, 90/275].
4. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Ahmed S. Yasin, Nasser A. M. Barakat and Ho-Suk Choi. "Design of an efficient photoanode for dye-sensitized solar cells using electrospun one-dimensional GO/N-doped nanocomposite SnO<sub>2</sub>/TiO<sub>2</sub>" *Applied Surface Science* **2017**, 400, 355-364 (DOI: 10.1016/j.apsusc.2016.12.176). Journal Ranking [IF = 3.387, Q1, Coatings & Films; Materials Science, 1/19].
5. Van-Duong Dao, Liudmila L. Larina, Quoc Chinh Tran, Van-Tien Bui, Van-Toan Nguyen, Thanh-Dong Pham, **Ibrahim M. A. Mohamed**, Nasser A. M. Barakat, Bui The Huy and Ho-Suk Choi. "Evaluation of Pt-based alloy/graphene nanohybrid electrocatalysts for triiodide reduction in dye-sensitized solar cells" *Carbon* **2017**, 116, 294-302 (DOI: 10.1016/j.carbon.2017.02.004). Journal Ranking [IF = 6.337, Q1, Physical Chemistry, 23/145].
6. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Ahmed S. Yasin, Mohamed A Yassin, Nasser A. M. Barakat and Ho-Suk Choi. "Synthesis of novel ZrO<sub>2</sub>&GO@TiO<sub>2</sub> nanocomposite as an efficient photoanode in dye-sensitized solar cells" *Superlattices and Microstructures* **2017**, 102, 235-245 (DOI: 10.1016/j.spmi.2016.12.037). Journal Ranking [IF = 2.123, Q2, Condensed Matter Physics, 31/67].
7. Nasser A.M. Barakat, M. Shaheer Akhtar, **Ibrahim M A Mohamed**, Yara Abu Dakk, Rawan Hamdan, Ahmed G. El-Deen, Khalid Elsaid, M. Obaid, Saeed Al-Meer. "Effective and Stable FeNi@ N-doped graphene Counter Electrode for Enhanced Performance Dye Sensitized Solar Cells" *Materials Letters* **2017**, 191, 80-84 (DOI: 10.1016/j.matlet.2017.01.044). Journal Ranking [IF = 2.572, Q2, Multidisciplinary Materials Science, 90/275].
8. **Ibrahim M A Mohamed**, Khalil A Khalil, Hamouda M Mousa and Nasser A M Barakat. "Ni/Pd-decorated Carbon Nanofibers as an Efficient Electrocatalyst for Methanol Oxidation in Alkaline

- Medium” Journal of Electronic Materials **2017**, 46 (1), 265–273 (DOI: 10.1007/s11664-016-4900-z). Journal Ranking [IF = 1.579, Q3, Electrical & Electronic Engineering, 140/260].
9. Ahmed S. Yasin, M. Obaid, **Ibrahim M. A. Mohamed**, Ahmed Yousef and Nasser A.M. Barakat “ZrO<sub>2</sub> nanofibers/activated carbon composite as novel and effective electrode material for enhanced performance capacitive deionization” RSC Advances **2017**, 7, 4616-4626 (DOI: 10.1039/C6RA26039J). Journal Ranking [IF = 3.108, Q2, Multidisciplinary Chemistry, 59/166].
  10. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Ahmed S. Yasin, Ho-Suk Choi, Khalil A Khalil, Nasser A. M. Barakat. “Facile synthesis of GO@SnO<sub>2</sub>/TiO<sub>2</sub> nanofibers and their behavior in photovoltaics” Journal of Colloid and Interface Science **2017**, 490, 303-313 (DOI: 10.1016/j.jcis.2016.11.041). Journal Ranking [IF = 4.233, Q1, Physical Chemistry, 35/145].
  11. **Ibrahim M. A. Mohamed**, Moaaed Motlak, M. Obaid, Mohammad S. Alsoufi, Tahani M. Bawazeer, Ahmed F. Mohamed, and Nasser A. M. Barakat. “Co/Cr-Decorated Carbon Nanofibers as Novel and Efficacious Electrocatalyst for Ethanol Oxidation in Alkaline Medium” Journal of Nanoscience and Nanotechnology **2017**, 2, 1280-1286 (7). Journal Ranking [IF = 1.483, Q3, Multidisciplinary Chemistry, 95/166].
  12. Ahmed S. Yasin, Hend Omar Mohamed, **Ibrahim M. A. Mohamed**, Hamouda M. Mousa, Nasser A.M. Barakat “Enhanced desalination performance of capacitive deionization using zirconium oxide nanoparticles-doped graphene oxide as a novel and effective electrode” Separation and Purification Technology **2016**, 171, 34-43 (DOI: 10.1016/j.seppur.2016.07.014). Journal Ranking [IF = 3.359, Q1, Chemical Engineering, 21/135].
  13. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Ahmed S. Yasin, Hamouda M Mousa, Hend Omar Mohamed, Ho-Suk Choi, Mohamed K. Hassan and Nasser A M Barakat. “Nitrogen-doped&SnO<sub>2</sub>-incorporated TiO<sub>2</sub> Nanofibers as Novel and Effective Photoanode for Enhanced Efficiency Dye-sensitized Solar Cells” Chemical Engineering Journal **2016**, 304, 48-60 (DOI: 10.1016/j.ccej.2016.06.061). Journal Ranking [IF = 6.216, Q1, Chemical Engineering, 6/135].
  14. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Ahmed S. Yasin, Ho-Suk Choi and Nasser A. M. Barakat. “Synthesis of novel SnO<sub>2</sub>@TiO<sub>2</sub> nanofibers as an efficient photoanode of dye-sensitized solar cells” International Journal of Hydrogen Energy **2016**, 41(25), 10578-10589 (DOI: 10.1016/j.ijhydene.2016.04.198). Journal Ranking [IF = 3.582, Q2, Physical Chemistry, 45/145].
  15. **Ibrahim M. A. Mohamed**, Van-Duong Dao, Nasser A. M. Barakat, Ahmed S. Yasin, Ahmed Yousef, Ho-Suk Choi. “Efficiency Enhancement of Dye-sensitized Solar Cells by Use of ZrO<sub>2</sub>-doped TiO<sub>2</sub> Nanofibers Photoanode” Journal of Colloid and Interface Science **2016**, 476, 9-19 (DOI: 10.1016/j.jcis.2016.04.051). Journal Ranking [IF = 4.233, Q1, Physical Chemistry, 35/145].
  16. **Ibrahim M. A. Mohamed**, Moaaed Motlak, M. Shaheer Akhtar, Ahmed S. Yasin, Mohamed H. El-Newehy, Salem S. Al-Deyab, Nasser A.M. Barakat. “Synthesis, Characterization and Performance as a Counter Electrode for Dye-Sensitized Solar Cells of CoCr-decorated Carbon

Nanofibers” *Ceramics International* **2016**, 42, 1, 146-153 (DOI: 10.1016/j.ceramint.2015.08.056). Journal Ranking [IF = 2.986, Q1, Ceramics Materials Science, 2/26].

- 17. Ibrahim M. A. Mohamed**, Moaaed Motlak and Nasser A. M. Barakat. “Cobalt/Chromium Nanoparticles-incorporated Carbon Nanofibers as effective Non-Precious Catalyst for Methanol Electrooxidation in Alkaline Medium” *Nano* **2016**, 11, 5, 1-10 (DOI: 10.1142/S1793292016500491). Journal Ranking [IF = 1.025, Q4, Multidisciplinary Materials Science, 208/275].
- 18. Ali M. Shaker**, Lobna A. E. Nassr, Mohamed S. S. Adam and **Ibrahim M. A. Mohamed**. “Kinetics of Acid Hydrolysis and Reactivity of Some Antibacterial Hydrophilic Iron(II) Imino-Complexes " *Russian Journal of Physical Chemistry A* **2015**, 89, 5, 759-765 (DOI: 10.1134/S0036024415050039). Journal Ranking [IF = 0.581, Q4, Physical Chemistry, 135/145].
- 19. Hany M. Abd El-Lateef**, M Ismael and **Ibrahim MA Mohamed**. “Novel Schiff bases amino acid as corrosion inhibitors for carbon steel in CO<sub>2</sub>-saturated 3.5 % NaCl solution–Experimental and computational study" *Corrosion Reviews* **2015**, 33, 2, 77-9 (DOI: 10.1515/corrrev-2014-0059). Journal Ranking [IF = 1.085, Q2, Metallurgy & Metallurgical Engineering, 33/74].
- 20. Ahmed M. Abu-Dief**, and **Ibrahim M A Mohamed**. "A review on application of transition metal complexes incorporating Schiff bases" *beni-suef university journal of basic and applied sciences*, **2015**, 4, 2, 119-133 (DOI: 10.1016/j.bjbas.2015.05.004).
- 21. Ali M. Shaker**, Lobna A. E. Nassr, Mohamed S. S. Adam and **Ibrahim M. A. Mohamed**. "Effect of Bromide Salts on the Acid Hydrolysis of Anti-bacterial Hydrophilic Schiff Base Amino Acid Iron (II) Complexes" *Russian Journal of General Chemistry* **2014**, 84, 10, 2037-2042 (DOI: 10.1134/S1070363214100302). Journal Ranking [IF = 0.553, Q4, Multidisciplinary Chemistry, 147/166].
- 22. Ali M. Shaker**, Lobna A. E. Nassr, Mohamed S. S. Adam and **Ibrahim M. A. Mohamed**. "Hydrophilicity and Acid Hydrolysis of Seven Water Soluble Antibacterial Iron (II) Schiff Base Complexes in Two Binary Aqueous Solvent Mixtures" *Russian Journal of General Chemistry* **2013**, 83, 12, 2460-2464 (DOI: 10.1134/S1070363213120438). Journal Ranking [IF = 0.553, Q4, Multidisciplinary Chemistry, 147/166].
- 23. Ali M. Shaker**, Lobna A. E. Nassr, Mohamed S. S. Adam and **Ibrahim M. A. Mohamed**. "Synthesis, Characterization and Spectrophotometric Studies of Seven Novel Antibacterial Hydrophilic Iron (II) Schiff Base Amino Acid Complexes." *Journal of the Korean Chemical Society* **2013**, 57, 5, 560-567 (DOI: 10.5012/jkcs.2013.57.5.560).

## **(ii) books**

- 1. Ibrahim M A Mohamed**, Lobna A. E. Nassr and Ali M. Shaker, "Kinetic Studies of Some Novel Hydrophilic Fe(II) Complexes” Lambert Academic Publishing, (**2013**).

### **(iii) Conferences**

1. (Poster) "Enhancement of the Photovoltaic Performance of Dye Sensitized Solar Cell using  $\text{TiO}_2/\text{SnO}_2$  Nanofibers as a Photoanode" 18th Topical Meeting of the International Society of Electrochemistry, 8-11 march 2016, Gwangju, South Korea.
2. (Oral) "Ethanol Electrooxidation by Novel Non-precious Cobalt/Chromium alloy decorated Carbon Nano Fiber " 2015 International Conference on Hybrid Materials (ICHM2015), May 15-17, 2015 Jeonju – South Korea.
3. (Poster) "Mechanistic aspects and Temperature Effect on the reaction between Antibacterial Hydrophilic Fe(II) Schiff base amino acid complexes and Reactive Oxygen Species" 2nd International Conference on Advanced basic and Applied science, April 2-4, 2014 Ain Sokhna – Egypt.
4. (Poster) "Kinetic Investigation of Some Hydrophilic Schiff Base Amino Acid Complexes" International Conference on chemistry and its role in development, Mar 11-15, 2013 Mansoura – Egypt.
5. (Poster) "Synthesis, Physico-Chemical Studies and antibacterial activity of Some New Hydrophilic Ferrous Schiff Base Amino Acid Complexes" The 1st Conference on Science Diplomacy and Developments in Chemistry Nov 24 – 26, 2012 Alexandria – Egypt.

### **COMPUTER AND LANGUAGE SKILLS:**

- Passing an ILETS test with a total score 5.5 (March 2014)
- Passing an IBT TOEFL test with a total score 65 (October 2011)
- Passing an institutional TOEFL test held at Sohag ESP center with a total score 527 (02/2010)
- Passing all modules required for the granting of International Computer Driving License (ICDL)
- Passing a general English course at Sohag ESP center with percentage 91%
- I have got statistical program for social science (SPSS) 2013
- I have a good knowledge in Photoshop, End Note and Front Page

### **RESEARCH INTEREST:**

**Synthesis of novel nanomaterials.      Nanomaterials for energy applications.**  
**Stability of inorganic compounds.      Electrochemical behavior of the novel materials.**

### **TEACHING EXPERIENCE:**

**Experimental Courses that I do (30h/w) at Sohag University include:**

Analytical chemistry	Physical Chemistry	Chemical kinetics
Chemistry problems	Inorganic chemistry	Instrumental Analysis

### **PERSONAL SKILLS:**

Team work	Work under stress	work with all levels of management and personnel
Learn new roles quickly	Very good presentation and writing report skills	

**Study spans the following areas:**

<b>Physical Chemistry</b> Chemical kinetics Colloid and Surface Chemistry Electrochemistry and its applications Thermodynamic Solid state and Catalysis	<b>Inorganic Chemistry</b> S and P elements. Transition Metals. Lanthanides and Actinides. Coordination Chemistry. Organometallics	<b>Analytical Chemistry</b> Quantitative analysis Qualitative analysis Separation Science Instrumental Analysis Molecular spectroscopy
<b>Organic Chemistry</b> Aromatic compounds Heterocyclic compounds Reaction Mechanism Petroleum compounds	Photo, Bio, Industrial, Nuclear, Polymer, Nano chemistry Renewable energy and Molecular symmetry.	

## References

### **Prof. Nasser A M Barakat**

Professor,

Department of Organic Materials & Fiber Engineering, Chonbuk National University, Republic of Korea.

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### **Dr. Van-Duong Dao**

Research Professor,

Department of Chemical Engineering and Applied Chemistry, Chungnam National University, 99 Daehak-ro, Yuseong-gu, Daejeon, 34134 Korea

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### **Dr. Emad F Newair**

Assistant Professor,

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Thanks for reading my CV